

REMARKS

Claims 1-13 are pending in the present application. By the present amendment, claims 1, 4, 5, 6, and 8-13 have been amended; claims 14-16 have been added; and claims 2, 3, and 7 have been cancelled.

Rejections under 103(a):

The Examiner has rejected claims 1-9 and 11-13 under 35 U.S.C. 103(a) as being unpatentable over Goto et al. (U.S. Patent # 5,505,898) in view of Thompson et al. (U.S. Patent # 4,895,205). Additionally, claim 10 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al. in view of Thompson et al. as applied to claim 1, and further in view of Reddoch (U.S. Patent # 4,982,787) and Best (U.S. Patent # 4,798,246). These rejections are respectfully traversed by the amendments to the claims presented with this response, and for the reasons hereafter set forth.

In order to establish a prima facie case of obviousness, the Examiner has the burden of proving, by reasoning or evidence, that: 1) there is some suggestion or motivation, either in the reference itself or in the knowledge available in the art, to modify that reference's teachings; 2) there is a reasonable expectation on the part of the skilled practitioner that the modification or combination has a reasonable expectation of success; and 3) the prior art reference must teach or suggest all of the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Both the teaching or suggestion and the reasonable expectation of success must be found in the prior art and not based on an applicant's disclosure. *Id.*

In carrying this burden, the Examiner "must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious." *Ex parte Clapp*, 227 USPQ 972, 973 (PTOBPAI 1985). A rejection based on §103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. *In re Warner*, 154 USPQ 173, 178 (CCPA 1967). The Examiner may not, because he may doubt that the invention is patentable, resort to speculation, unfounded assumptions, or hindsight reconstruction to supply deficiencies in his required factual basis. *Id.*

As regards, claims 1, 6 and 11, and the claims dependent thereon, as amended by this Amendment, the elements of said claims now recite specific structure for the cleaning mechanism,

including two discus plates, each having a top and bottom surface, a discus wiper positioned between such plates, and a plurality of independent spacers affixed to corresponding surfaces of the discus plates, said spacers connecting and separating said discus plates.

The cleaning mechanism of Thompson comprises an upper annular ledge 40; a wiper 32; and a lower ledge 38 (actually, a trough [See Col. 5, Line 51]) having a fluid container portion 39A, for receiving fluids flowing off of the upper surface 31 of wiper 32 [See Col. 3, Lines 59-61] and off of the upper ledge 40 [See Col. 5, Lines 52-54]. While it is not clear from the disclosure of Thompson whether the upper annular ledge comprises a discus plate as required in the amended claims of the present application, it is clear that the trough/fluid container configuration of lower ledge 38 does not (“lower ledge 38 is actually a lower trough 39, having a fluid container portion 39A” [See Col. 5, Lines 51-52]). Furthermore, there is no motivation in Thompson to replace the trough 38 with a plate of the present invention; in fact, such a replacement would partially destroy the functionality of Thompson’s device. The invention disclosed in Thompson regards a contained pipe washing system, with the partial intent of controlling the disposal of the waste water used in said washing, wherein water applied to the pipe above the wiper 32 is channeled and expelled in a controlled manner from the top of the wiper 32, by means of the upper ledge 40, through flow openings 41, to the trough 39A, and exiting the system at fluid exit line 90 [See Col. 5, Lines 34-57 (“... a great deal of water ... is being flowed into the housing 12, and therefore must be retrieved.”)]. If the trough were not part of the system, and the lower ledge 38 was merely a discus plate as claimed in the present invention, the fluid would not be contained and channeled through exit line 90; therefore, without further modifications or accommodations, it would flow back to the bell nipple 75 and the drill hole. While the Thompson device is designed so that mud from the pipe flows back into the drill hole, it seems apparent that flowing excess water back into the drill hole would be undesirable (particularly in light of the extensive design to channel the water out through exit line 90). Thus, not only does the disclosure of Thompson fail to recite two plates in the configuration as claimed in the present invention, it also would not be obvious to one skilled in the art (and would in fact be destructive to the Thompson invention) to replace the trough 38 with a plate of the present invention.

Furthermore, the examiner recites that Thompson discloses “spacers” 22 and 26 for effecting movement of the plates from open to closed. Thompson describes elements 22 and 26 as a “hinge member” and a “locking member”, respectively [See Col. 3, lines 32-34], which allow

the device of Thompson to open along its vertical spine (at the hinge member 22). Neither of these hinge/locking members, nor the outer surfaces of the device 18 and 20, comprise a spacer affixed to the top or bottom surfaces of the annular ledges 38 and 40 of the Thompson invention, as required by the amended claims. The hinge/locking members 22, 26 are on the exterior walls 18 and 20 and therefore have no pertinent relation to the location of the upper and lower ledges. Similarly, the exterior walls 18, 20 have only partial relation with the ledges 38 and 40, providing support at the edges and not the surfaces thereof. Finally, there is no motivation to modify Thomson et al. to incorporate the plurality of spacers as claimed in the present application; in fact, they would only serve to interfere with the orchestrated flow of waste water in the Thompson device. As various elements of the independent claims are not present in the prior art cited by the examiner, the rejection under § 103 is no longer applicable to the claims as amended.

The examiner's rejection of claim 10 rests primarily on the above-discussed references, adding thereto the patents of Reddoch and Best. However, there is no motivation provided in any of the prior art to combine these references. Reddoch regards multiple wipers; Best regards multiple spring-loaded scrapers. The examiner states that the multiple wipers are conventional, well-known equivalents for single wipers; and that employing biasing springs would be obvious to one skilled in the art to ensure that the scraper is in constant contact with the outside of the pipe. However, the single wiper in Thompson could not merely be replaced with a plurality of wipers, or with a plurality of spring loaded wipers. Thompson relies upon the friction of a single wiper as the pipe passes through the central bore to cause the water to travel as discussed above [See Col. 5, Lines 37-43]. Therefore, the wiper 32 in Thompson functions both to remove the mud, and to hold and channel the water from the cleaning portion of the device. It does so using inherent pressure resulting from pulling a pipe through the bore of the wiper, while said wiper is in channel 30, between upper and lower ledges 38 and 40. To use multiple flaps in lieu of a single wiper would damage the pressure/friction relationship of the wiper 32 to the system, and thereby lose the benefits of channeling waste water out of the system. Furthermore, the flaps in Reddoch use fluid power to remain "closed" [See Col. 2, Line 67], which allows them to press against the pipe and remove mud therefrom. To incorporate this structure into Thompson would add to the complication of the system, with no additional benefit. Therefore, there is no motivation to combine the teachings of Thompson and Reddoch. Finally, claim 10 has been amended by this Amendment to reflect more

specific structural features of the multiple-flap embodiment of the present invention; none of such structural features are found in Reddoch or Best.

For the reasons set forth above, applicant believes that the claim amendments overcome the prior art rejections under Section 103(a), and should be in position for allowance.

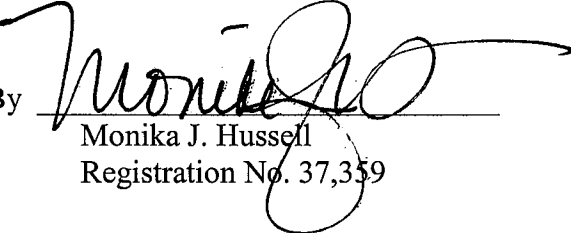
Rejections under 112:

The Examiner has rejected claims 5, 9 and 13 under 35 U.S.C. 112, second paragraph, as being unpatentable as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. In response to these rejections, claims 14-16 have been added in this amendment to provide said antecedent basis.

Applicant respectfully submits that the present application is in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,

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